LEGEND

- GRANITE BND
- GRANITE BND W/DH
- MARBLE BND W/DH
- MARBLE BND
- CONC H BND
- CONC BND W/DH
- IP FOUND
- IP W/CAP
- GUN BARREL FND
- DRILL HOLE–SURVEY CONTROL PT.
- PTS STAKE
- MAG NAIL
- PK NAIL
- WIRE FENCE
- EDGE OF TREELINE
- WOOD FENCE
- CHAINLINK FENCE
- TREES
- SHRUBERY
- CARWASH VACUUM STATION
- GUY ANCHOR
- MONITORING WELL
- EXISTING CONTOURS
- LIMIT OF REMEDIATION
- EDGE OF RIVER
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- LUMINAIRE
- PROPERTY LINE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- S — SANITARY SEWER
- D — STORM SEWER
- W — WATER
- G — GAS
- OH — OVERHEAD LINES
- T — TELEPHONE
- E — ELECTRIC
- GUARDRAIL
- RETAINING WALL
- ROCK/BOULDER
- POST
- WATER SHUTOFF VALVE
- GV — GATE VALVE OR GAS VALVE
- HYDRANT
- SIGNPOST
- PARKING BUMPER
- UTILITY POLE
- 1 / 02 19 — DETAIL NUMBER; SHEET WHERE DETAIL IS SHOWN; SHEET WHERE DETAIL IS REFERENCED
- A / 02 12 — SECTION IDENTIFIER; SHEET WHERE SECTION IS SHOWN; SHEET WHERE SECTION IS REFERENCED
- CELL BOUNDARY
- STAGING AREA
- 975 — FINAL GRADE CONTOURS
- PRECAST CONCRETE WALL PANELS
- 2:1 MAX — TOP OF SLOPE / TOE OF SLOPE
- ℄ RIVER
- FLOW DIRECTION
- 1 — CONTROL POINT FOR SHEET PILE WALL
- SHEET PILE
- RIVER WALK
- + 967.0 — FINAL GRADE SPOT ELEV.

GENERAL NOTES:

1. EXISTING SURVEYS PROVIDED BY: SK–DESIGN GROUP INC., 2 FEDERICO DRIVE, PITTSFIELD MA 01201, JAMES E. SEIDL P.L.S.; COL–EAST, INC., HARRIMAN & WEST AIRPORT, P.O. BOX 347, NORTH ADAMS MA 01247; HILL ENGINEERS, ARCHITECTS, PLANNERS, INC., 50 DEPOT ST., DALTON MA 01226.
2. TOPOGRAPHIC FIELD SURVEY AND PLANS WERE PREPARED IN ACCORDANCE WITH THE PROCEDURAL AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS BETWEEN SEPTEMBER 19, 2000 AND DECEMBER 1, 2000.
3. HORIZONTAL DATUM BASED ON MASSACHUSETTS STATE PLANE COORDINATES NAD 1983.
4. VERTICAL DATUM BASED ON NAVD 1988.
5. "EXCAVATION SUBCONTRACTOR" SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO EXCAVATING, TRENCHING, OR GRADING.
6. "EXCAVATION SUBCONTRACTOR" SHALL VERIFY AND COORDINATE THE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK.
7. DISCREPANCIES IDENTIFIED BY THE "EXCAVATION SUBCONTRACTOR" BETWEEN THE SPECIFICATIONS, DRAWINGS, AND SITE CONDITIONS SHALL BE REPORTED TO THE GENERAL CONTRACTOR. WORK PERFORMED BY THE "EXCAVATION SUBCONTRACTOR" PRIOR TO RESOLUTION OF SUCH DISCREPANCY BY THE GENERAL CONTRACTOR SHALL BE DONE AT THE "EXCAVATION SUBCONTRACTOR'S" RISK.
8. THE "EXCAVATION SUBCONTRACTOR" IS RESPONSIBLE FOR INFORMATION CONTAINED IN THE FOLLOWING REFERENCES:

8.1 DRAFT BASIS OF DESIGN FOR PHASE 2 OF THE 1.5–MILE REMOVAL ACTION, DCN GE–121902–ABJE, DECEMBER–2002.

8.2 PRE–DESIGN SUMMARY, 1.5 MILE REMOVAL ACTION PHASE 2, DCN: GE–050202–AAZL, JULY, 2002.

9. LIMITS OF REMEDIATION ARE BASED ON: AVERAGE ANNUAL WATER FLOW ELEVATION AS INDICATED IN HEC–RAS MODEL OUTPUT (SEE DRAFT BASIS OF DESIGN FOR PHASE 2) FOR STATION 527+60 TO STA. 543+50. AVERAGE ANNUAL WATER FLOW ELEVATION USED TO DISTINGUISH BETWEEN RIVER SEDIMENTS AND BANK SOILS.
10. EXCAVATION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROJECT RELATED SNOW REMOVAL, WITHIN THE AREAS SHOWN ON THESE DRAWINGS AND OUTSIDE OF THE AREAS SHOWN ON THESE DRAWINGS, SUCH AS ACCESS ROADS, STAGING AREAS, TRAILER AREAS, STOCKPILE AREAS, ETC. SNOW SHALL NOT BE PLOWED ONTO RESTORED RIVERBANKS, BEYOND SILT FENCES, OR IN AREAS NOT APPROVED BY THE ENGINEER.

DRAWING SCHEDULE

SHEET	SHEET REFERENCE NUMBER	TITLE	SHEET	SHEET REFERENCE NUMBER	TITLE
1	1000	GENERAL NOTES AND LEGEND	16	2010	CROSS SECTIONS 5 OF 5
2	1001	PLAN OF EXISTING CONDITIONS 1 OF 2	17	2101	REVEGETATION RESTORATION DETAILS
3	1002	PLAN OF EXISTING CONDITIONS 2 OF 2			
4	1003	CONTAMINATED MATERIAL REMOVAL AREAS 1 OF 2			
5	1004	CONTAMINATED MATERIAL REMOVAL AREAS 2 OF 2			
6	2000	GRADING PLAN 1 OF 2			
7	2001	GRADING PLAN 2 OF 2			
8	2002	RIVERBED AND RIVERBANK ARMORING DETAILS			
~~9~~	~~2003~~	~~BOARDWALK LAYOUT PLAN~~ NOT INCLUDED IN THIS PACKAGE TO BE ISSUED UNDER SEPARATE COVER			
~~10~~	~~2004~~	~~BOARDWALK DETAILS 1 OF 2~~			
~~11~~	~~2005~~	~~BOARDWALK DETAILS 2 OF 2~~			
12	2006	CROSS SECTIONS 1 OF 5			
13	2007	CROSS SECTIONS 2 OF 5			
14	2008	CROSS SECTIONS 3 OF 5			
15	2009	CROSS SECTIONS 4 OF 5			

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.
A	DRAFT DESIGN SUBMITTAL	10/3/03	
B	FINAL DESIGN SUBMITTAL	2/20/04	

Designed by: TD/RJ | Dwn by: BEG | Ckd by: TD | Reviewed by: | Submitted by: | Chief, Arch. Section
Date: | Rev. B | Design file no: | SPEC. No.: | File name: 1000.DWG | Plot date: 2–11–04 | Plot scale: AS SHOWN

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS | WOODLOT ALTERNATIVES, INC.

1.5 MILE REMOVAL ACTION – PHASE 2 – STA 527+60 TO STA 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

GENERAL NOTES AND LEGEND

Sheet reference number:
1000
1 OF 17

SDMS 204561
GE-022004-ACBA

MATCHLINE (SEE DRAWING 1002)

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
B	FINAL DESIGN SUBMITTAL	2/20/04	
A	DRAFT DESIGN SUBMITTAL	10/24/03	

Designed by: TD/RJ | Date: | Rev: B
Drawn by: BES | Cad by: TD | Design file no:
Reviewed by: | SPEC. No.:
Submitted by: | File name: 1001-1002.DWG
Chief, Arch. Section | Plot date: 24-Feb-04
Plot scale: AS SHOWN

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS, INC. | WOODLOT ENVIRONMENTAL

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 527+60 TO STA 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

PLAN OF EXISTING CONDITIONS
1 OF 2

Sheet reference number:
1001
2 OF 17

STATE OF MAINE
Richard Anthony Delano
7693
Registered PROFESSIONAL ENGINEER

GRAPHIC SCALE
40 20 0 20 40
APPROXIMATE SCALE IN FEET

FINAL DESIGN SUBMITTAL

M:\Design\DWG\COE\SSERC\2nd_0.5mi\Design Drawings - 0.5mi to Dawes - 600 ft to Dawes\1001-1002.dwg, 1001, 2/20/2004 8:36:04 AM, gbrewer

MATCHLINE (SEE DRAWING 1001)

GRAPHIC SCALE
40 20 0 20 40
APPROXIMATE SCALE IN FEET

STATE OF MAINE
Richard Anthony Delano
7883
REGISTERED PROFESSIONAL ENGINEER

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
B	FINAL DESIGN SUBMITTAL	12/8/04	
A	DRAFT DESIGN SUBMITTAL	10/4/04	

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

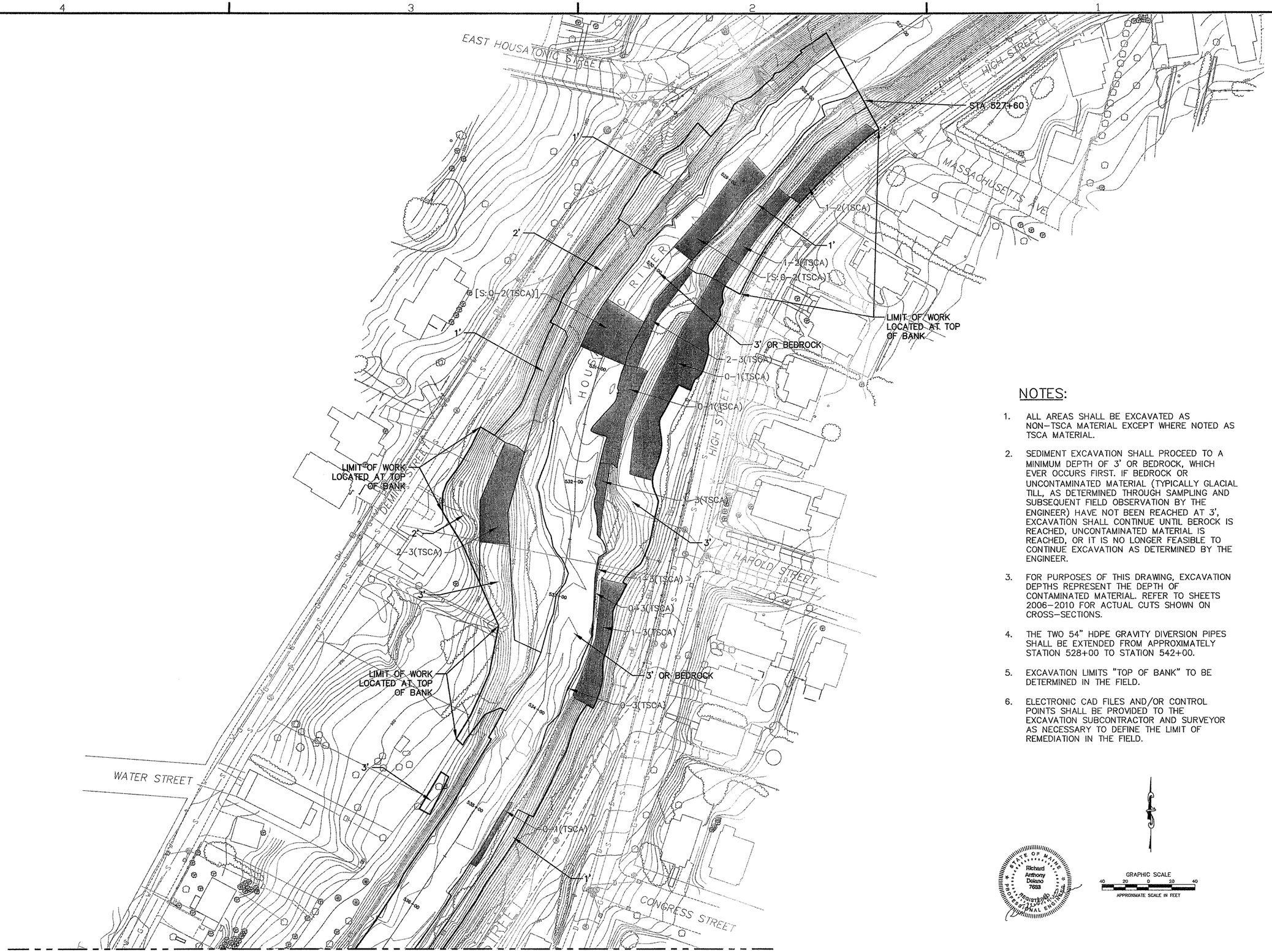
WESTON SOLUTIONS
WOODLOT ENVIRONMENTAL

Designed by: TD/RJ		Date:	Rev: B
Dwn by: BEG	Ckd by: TD	Design file no:	
Reviewed by:		SPEC. No.:	
Submitted by: Chief, Arch. Section		File name: 1001-1002.DWG Plot date: 2-11-04 Plot scale: AS SHOWN	

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 527+60 TO STA 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

PLAN OF EXISTING CONDITIONS 2 OF 2

Sheet reference number:
1002
3 OF 17



NOTES:

1. ALL AREAS SHALL BE EXCAVATED AS NON-TSCA MATERIAL EXCEPT WHERE NOTED AS TSCA MATERIAL.
2. SEDIMENT EXCAVATION SHALL PROCEED TO A MINIMUM DEPTH OF 3' OR BEDROCK, WHICH EVER OCCURS FIRST. IF BEDROCK OR UNCONTAMINATED MATERIAL (TYPICALLY GLACIAL TILL, AS DETERMINED THROUGH SAMPLING AND SUBSEQUENT FIELD OBSERVATION BY THE ENGINEER) HAVE NOT BEEN REACHED AT 3', EXCAVATION SHALL CONTINUE UNTIL BEROCK IS REACHED, UNCONTAMINATED MATERIAL IS REACHED, OR IT IS NO LONGER FEASIBLE TO CONTINUE EXCAVATION AS DETERMINED BY THE ENGINEER.
3. FOR PURPOSES OF THIS DRAWING, EXCAVATION DEPTHS REPRESENT THE DEPTH OF CONTAMINATED MATERIAL. REFER TO SHEETS 2006-2010 FOR ACTUAL CUTS SHOWN ON CROSS-SECTIONS.
4. THE TWO 54" HDPE GRAVITY DIVERSION PIPES SHALL BE EXTENDED FROM APPROXIMATELY STATION 528+00 TO STATION 542+00.
5. EXCAVATION LIMITS "TOP OF BANK" TO BE DETERMINED IN THE FIELD.
6. ELECTRONIC CAD FILES AND/OR CONTROL POINTS SHALL BE PROVIDED TO THE EXCAVATION SUBCONTRACTOR AND SURVEYOR AS NECESSARY TO DEFINE THE LIMIT OF REMEDIATION IN THE FIELD.

STATE OF MAINE
Richard Anthony Delano
7633
REGISTERED PROFESSIONAL ENGINEER

GRAPHIC SCALE
40 20 0 20 40
APPROXIMATE SCALE IN FEET

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.
B	FINAL DESIGN SUBMITTAL	2/26/04	
A	DRAFT DESIGN SUBMITTAL	10/08/	

Designed by: TD/RJ
Drawn by: BEG
Checked by: TD
Reviewed by:
Submitted by:
Chief, Arch. Section
Date:
Design file no:
SPEC. No.:
Rev. B
File name: 1003-1004.DWG
Plot date: 2-11-04
Plot scale: AS SHOWN

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS
WOODLOT ENVIRONMENTAL

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 527+60 TO STA 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

CONTAMINATED MATERIAL REMOVAL AREAS 1 OF 2

Sheet reference number:
1003
4 OF 17

MATCHLINE (SEE DRAWING 1003)

NOTES:

1. ALL AREAS SHALL BE EXCAVATED AS NON-TSCA MATERIAL EXCEPT WHERE NOTED AS TSCA MATERIAL.
2. SEDIMENT EXCAVATION SHALL PROCEED TO A MINIMUM DEPTH OF 3' OR BEDROCK, WHICH EVER OCCURS FIRST. IF BEDROCK OR UNCONTAMINATED MATERIAL (TYPICALLY GLACIAL TILL, AS DETERMINED THROUGH SAMPLING AND SUBSEQUENT FIELD OBSERVATION BY THE ENGINEER) HAVE NOT BEEN REACHED AT 3', EXCAVATION SHALL CONTINUE UNTIL BEROCK IS REACHED, UNCONTAMINATED MATERIAL IS REACHED, OR IT IS NO LONGER FEASIBLE TO CONTINUE EXCAVATION AS DETERMINED BY THE ENGINEER.
3. FOR PURPOSES OF THIS DRAWING, EXCAVATION DEPTHS REPRESENT THE DEPTH OF CONTAMINATED MATERIAL. REFER TO SHEETS 2006-2010 FOR ACTUAL CUTS SHOWN ON CROSS-SECTIONS.
4. THE TWO 54" HDPE GRAVITY DIVERSION PIPES SHALL BE EXTENDED FROM APPROXIMATELY STATION 528+00 TO STATION 542+00.
5. EXCAVATION LIMITS "TOP OF BANK" TO BE DETERMINED IN THE FIELD.
6. ELECTRONIC CAD FILES AND/OR CONTROL POINTS SHALL BE PROVIDED TO THE EXCAVATION SUBCONTRACTOR AND SURVEYOR AS NECESSARY TO DEFINE THE LIMIT OF REMEDIATION IN THE FIELD.

STATE OF MAINE
Richard Anthony Delano
7683
REGISTERED PROFESSIONAL ENGINEER

GRAPHIC SCALE
40 20 0 20 40
APPROXIMATE SCALE IN FEET

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.
B	FINAL DESIGN SUBMITTAL	09/06					
A	DRAFT DESIGN SUBMITTAL	10/05					

Date:
Design file no:
SPEC. No.:
File name: 1003-1004.DWG
Plot date: 2-11-04
Plot scale: AS SHOWN
Rev. B

Designed by: TD/RJJ
Drwn by: BEG
Chkd by: TD
Reviewed by:
Submitted by:
Chief, Arch. Section

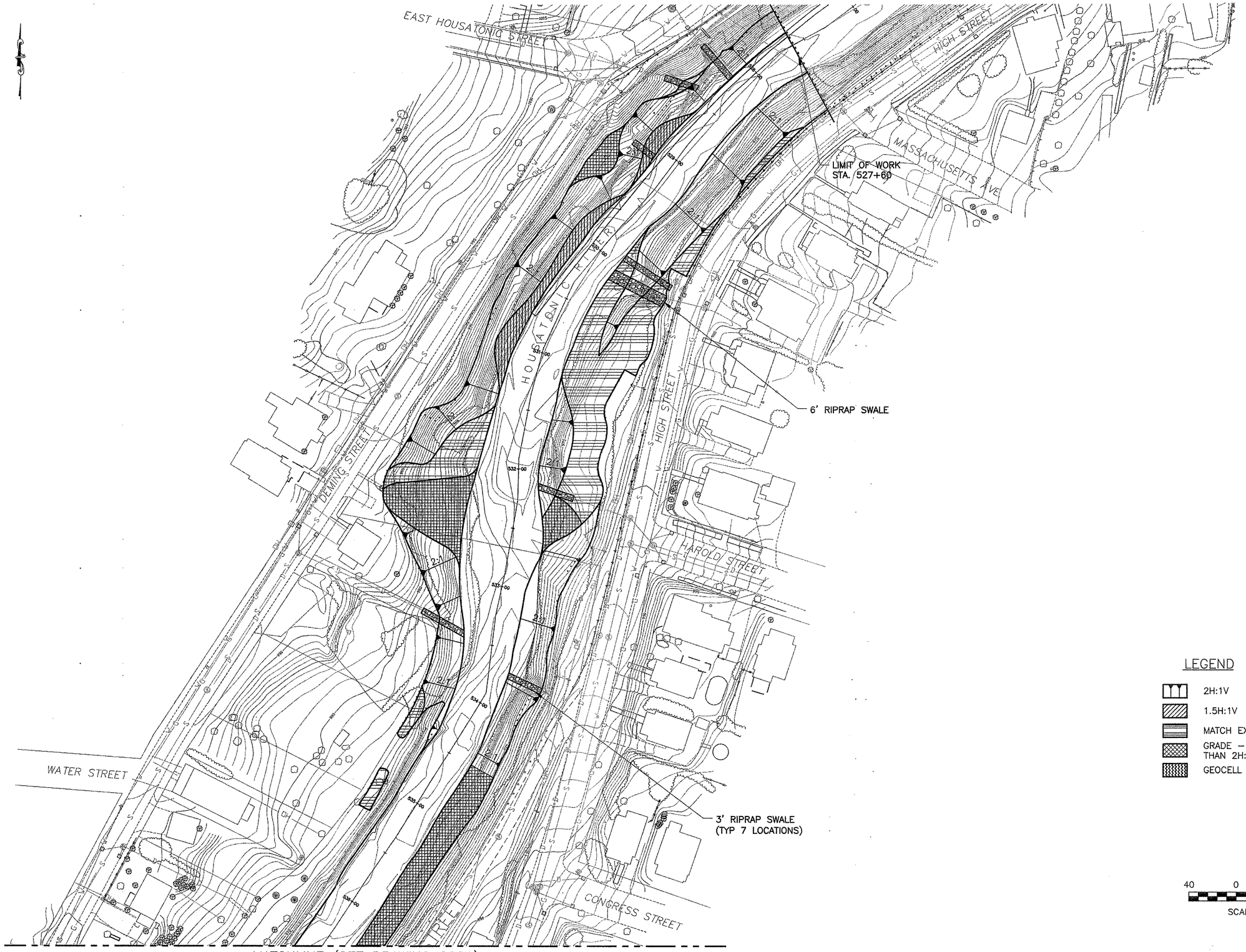
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS
WOODLOT ENVIRONMENTAL

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 527+60 TO STA 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

CONTAMINATED MATERIAL REMOVAL AREAS 2 OF 2

Sheet reference number:
1004
5 OF 17



LEGEND

- 2H:1V
- 1.5H:1V
- MATCH EXISTING GRADE
- GRADE – SLOPE FLATTER THAN 2H:1V
- GEOCELL

ROBERT W. MACKIE JR
REGISTERED PROFESSIONAL ENGINEER
2-19-04

40 0 40 80 FEET

SCALE: 1"=40'

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
A	DRAFT DESIGN SUBMITTAL	10/NOI	
B	FINAL DESIGN SUBMITTAL	2/2004	

Date: 2/20/04 Rev. B
Designed by: SW
Dwn by: Ckd by: E.DIFATTA RWM
Reviewed by:
Submitted by: Chief, Arch. Section
Design file no:
SPEC. No.:
File name:
Plot date:
Plot scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

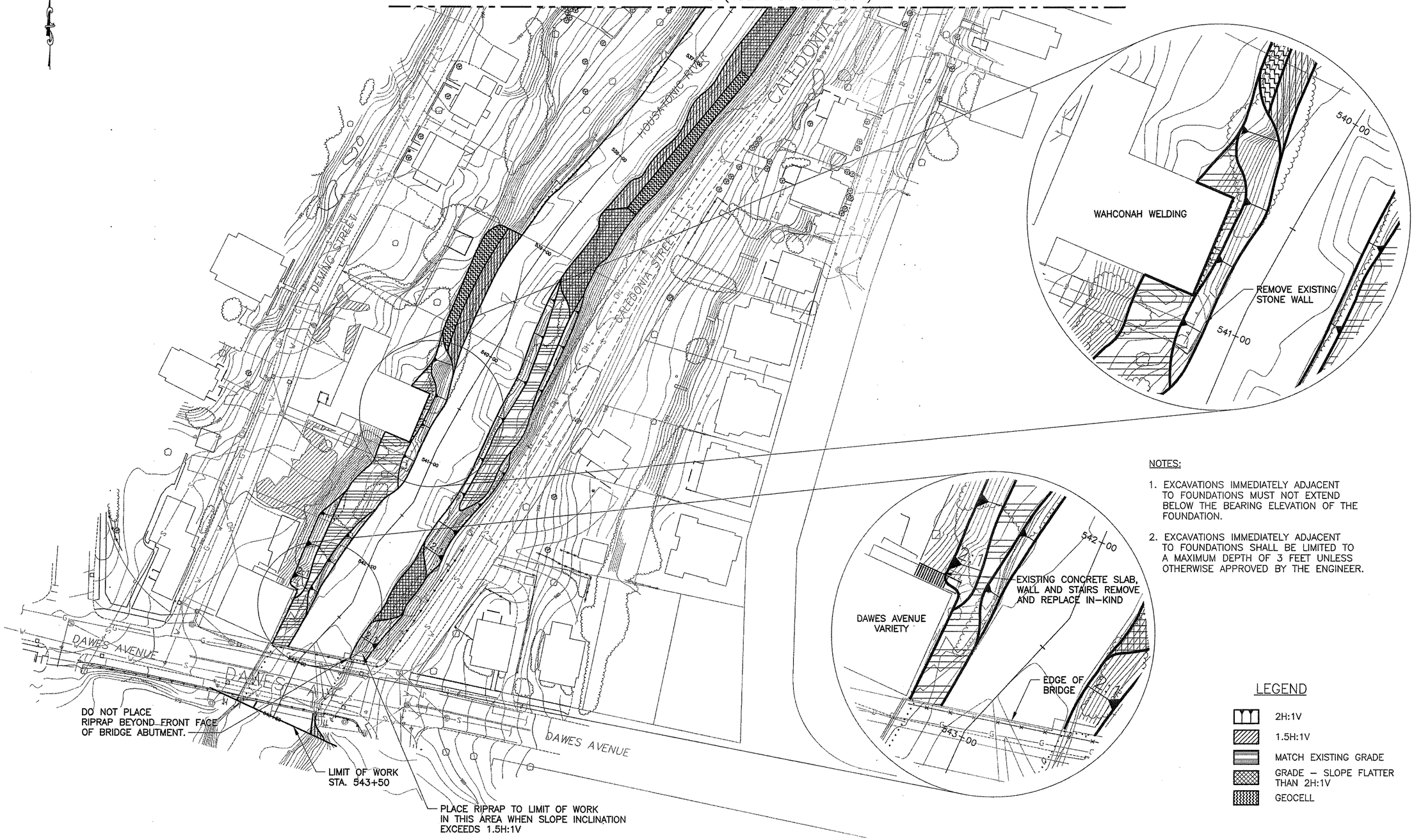
WESTON SOLUTIONS, INC. WOODLOT ENVIRONMENTAL

1.5 MILE REMOVAL ACTION - PHASE II - STA 527+60 TO STA 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

GRADING PLAN
SHEET 1 OF 2

Sheet reference number:
2000
6 OF 17

MATCHLINE (SEE DRAWING 2000)



NOTES:

1. EXCAVATIONS IMMEDIATELY ADJACENT TO FOUNDATIONS MUST NOT EXTEND BELOW THE BEARING ELEVATION OF THE FOUNDATION.
2. EXCAVATIONS IMMEDIATELY ADJACENT TO FOUNDATIONS SHALL BE LIMITED TO A MAXIMUM DEPTH OF 3 FEET UNLESS OTHERWISE APPROVED BY THE ENGINEER.

LEGEND

- 2H:1V
- 1.5H:1V
- MATCH EXISTING GRADE
- GRADE – SLOPE FLATTER THAN 2H:1V
- GEOCELL

REGISTERED PROFESSIONAL
ROBERT W. MACKIE JR
ENGINEER
PE032729E
2-19-04

40 0 40 80 FEET

SCALE: 1"=40'

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
B	FINAL DESIGN SUBMITTAL	2/20/04	
A	DRAFT DESIGN SUBMITTAL	10/24/03	

Designed by: SW
Drawn by: EDF/ATA
Reviewed by:
Date: 2/20/04
Ckd by: RWM
SPEC. No.:
Submitted by:
Rev: B
Design file no:
File name:
Plot date:
Plot scale:
Chief, Arch. Section

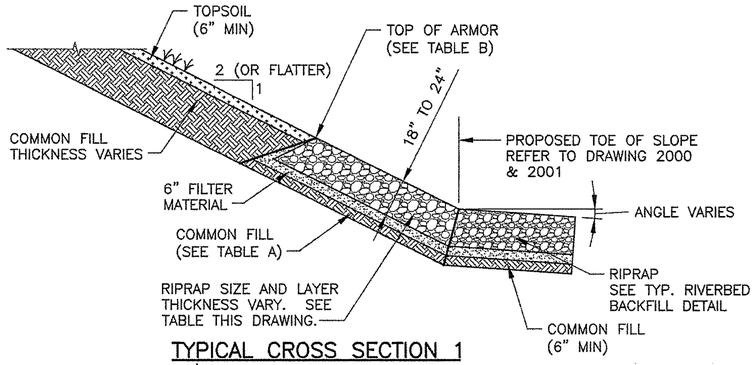
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS, INC. (WESTON & SAMPSON)

1.5 MILE REMOVAL ACTION - PHASE II - STA 527+60 TO STA 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

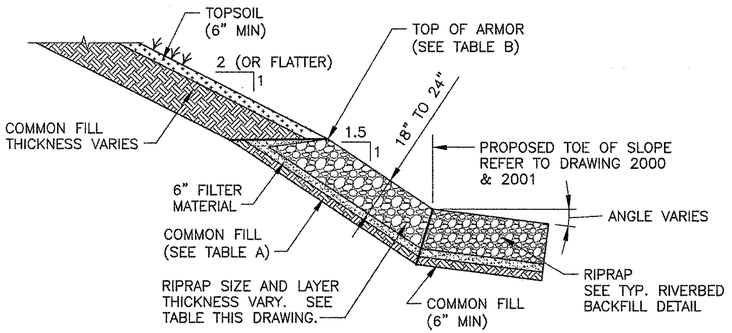
GRADING PLAN
SHEET 2 OF 2

Sheet reference number:
2001
7 OF 17



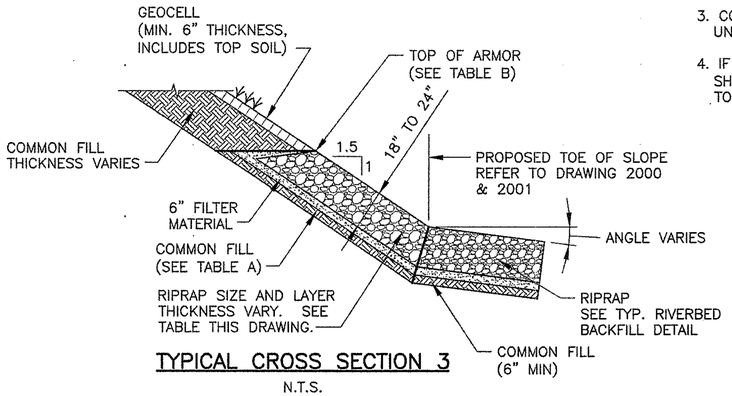
TYPICAL CROSS SECTION 1

N.T.S.



TYPICAL CROSS SECTION 2

N.T.S.



TYPICAL CROSS SECTION 3

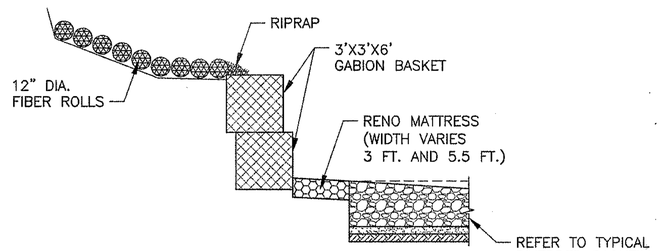
N.T.S.

NOTES:

1. FINAL GRADES ARE HORIZONTAL TO VERTICAL (H:V).
2. SEE SPECIFICATION 02300 FOR RIPRAP AND FILTER LAYER MATERIAL REQUIREMENTS.
3. RIPRAP SHALL BE CONTINUOUS ACROSS RIVERBED UNLESS ROCK OUTCROPS ARE ENCOUNTERED IN WHICH CASE RIPRAP SHALL BE TRANSITIONED SMOOTHLY INTO BEDROCK OUTCROP.
4. COMMON FILL THICKNESS BENEATH RIVERBANK RIP RAP SHALL BE AS INDICATED IN TABLE A. COMMON FILL THICKNESS BENEATH TOP SOIL SHALL BE AS REQUIRED TO ACHIEVE FINAL GRADE.

TABLE A: RIVERBANK BACKFILL REQUIREMENTS

STATION	CROSS SECTION	RIPRAP		FILTER MATERIAL	COMMON FILL
		SIZE	THICKNESS		
EAST					
527+60 TO 529+75	1	12"	18"	6"	0
529+75 TO 536+75	1	18"	24"	6"	6"
536+75 TO 538+35	3	18"	24"	6"	6"
538+35 TO 543+50	1	18"	24"	6"	6"
WEST					
527+60 TO 529+60	1	12"	18"	6"	0
528+60 TO 529+40	2	12"	18"	6"	0
529+40 TO 529+60	1	12"	18"	6"	0
529+60 TO 531+40	2	12"	18"	6"	0
531+40 TO 533+50	1	12"	18"	6"	0
533+50 TO 534+50	1	18"	24"	6"	6"
534+50 TO 539+00	EXISTING GABION BASKETS				
539+00 TO 540+00	3	18"	24"	6"	6"
540+00 TO 543+50	1	18"	24"	6"	6"



EXISTING GABION RIVER BANK STABILIZATION STA. 534+50 TO STA. 539+00

N.T.S.

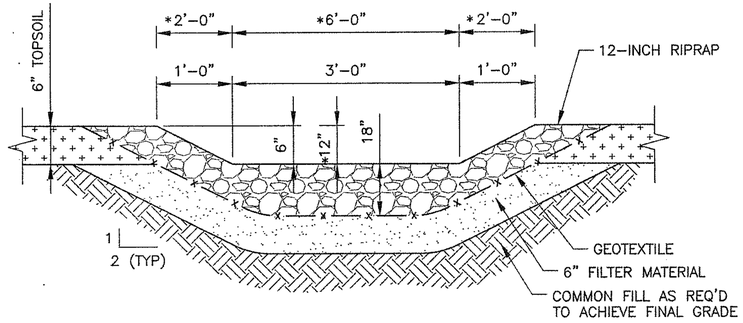
NOTES:

1. EXISTING SINGLE GABION BASKETS INSTALLED AT SOME LOCATIONS.
2. RENO MATTRESS INSTALLED WITHOUT GABION BASKETS, FROM STA. 536+50 TO STA. 537+00 AND STA. 537+50 TO STA. 538+00
3. COMPLETE WORK IN A MANNER THAT MINIMIZES THE POTENTIAL OF UNDERMINING MATTRESSES.
4. IF UNDERMINING OCCURS DURING EXCAVATION THE EXCAVATION SUBCONTRACTOR SHALL PLACE 12" RIPRAP (OR GROUT) UNDER THE EDGE OF THE MATTRESSES TO PREVENT FUTURE UNDERMINING AND TO STABLIZE THE MATTRESSES.

TABLE B:
TOP OF RIPRAP ARMOR ELEVATIONS

STATION	TOP OF ARMOR ELEV.
527+60	972.0
530+00	971.5
532+00	971.0
534+00	970.5
536+00	970.0
538+00	969.5
540+00	969.0
543+50	968.2

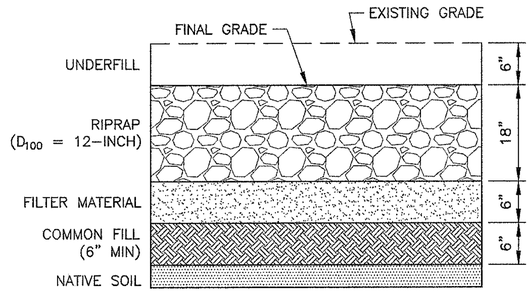
NOTE:
1. ABOVE ELEVATIONS REPRESENT MINIMUM TOP OF RIPRAP ARMOR ELEVATIONS WHICH MUST BE ACHIEVED ON THE RIVERBANK AT THE RESPECTIVE STATIONS. SEE CROSS SECTIONS FOR TOP OF RIPRAP ELEVATIONS AT INTERMEDIATE STATIONS. EXCAVATION SUBCONTRACTOR TO MAKE AS SMOOTH A TRANSITION AS PRACTICAL IN TOP OF RIVERBANK RIPRAP ELEVATION BETWEEN STATIONS.
2. WITHIN BRIDGE OPENING PLACE RIPRAP TO EXISTING GRADE (+0,−6")



RIPRAP SWALE DETAIL

N.T.S.

* DENOTES DIMENSIONS FOR 6 FOOT WIDE SWALE

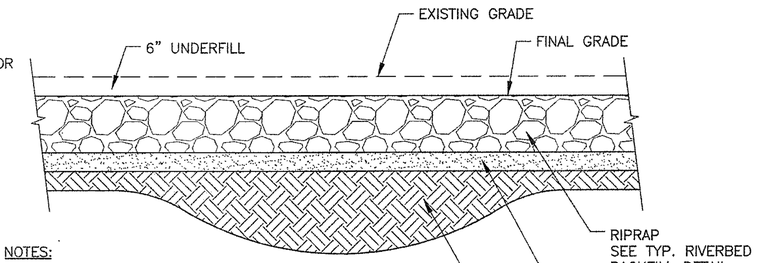


TYPICAL RIVERBED BACKFILL DETAIL

N.T.S.

NOTES:

1. IF BEDROCK IS ENCOUNTERED WITHIN 2.5 FEET OF THE EXISTING RIVERBED SURFACE, BACKFILLING IS NOT REQUIRED, UNLESS DIRECTED BY THE ENGINEER.
2. RIVERBED BACKFILL CROSS SECTION SHALL BE EXTENDED TO STA. 543+50.



NOTES:

1. IF AND WHEN OVER-EXCAVATION IS REQUIRED, I.E. EXCAVATION GREATER THAN 3 FEET, THE EXCAVATION SHALL BE BACKFILLED AS INDICATED ABOVE.
2. IF AREA SURROUNDING OVER-EXCAVATION IS NOT BACKFILLED, I.E., BEDROCK IS ENCOUNTERED WITHIN 2.5 FEET OF THE RIVERBED SURFACE, BACKFILL OVER-EXCAVATED AREA WITH 12-INCH RIPRAP OR AS OTHERWISE DIRECTED BY THE ENGINEER.

RESTORATION OF ISOLATED OVER-EXCAVATION DETAIL

N.T.S.

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
B	FINAL DESIGN SUBMITTAL	2/20/04	
A	DRAFT DESIGN SUBMITTAL	10/10/03	

Designed by: AH/WAZ | Date: 2/20/04 | Rev: B
Drwn by: EDF/ATTA | Chkd by: RWM | Design file no:
Reviewed by: | SPEC. No.:
Submitted by: | File name:
Chief, Arch. Section | Plot date:
Plot scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

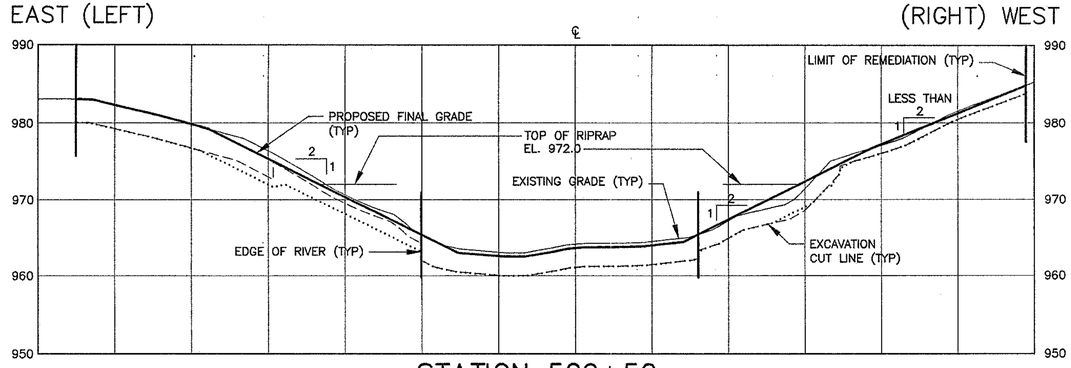
WESTON SOLUTIONS
WOODLOT ALTERNATIVES, INC.

15 MILE REMOVAL ACTION - PHASE II - STA 527+60 TO 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

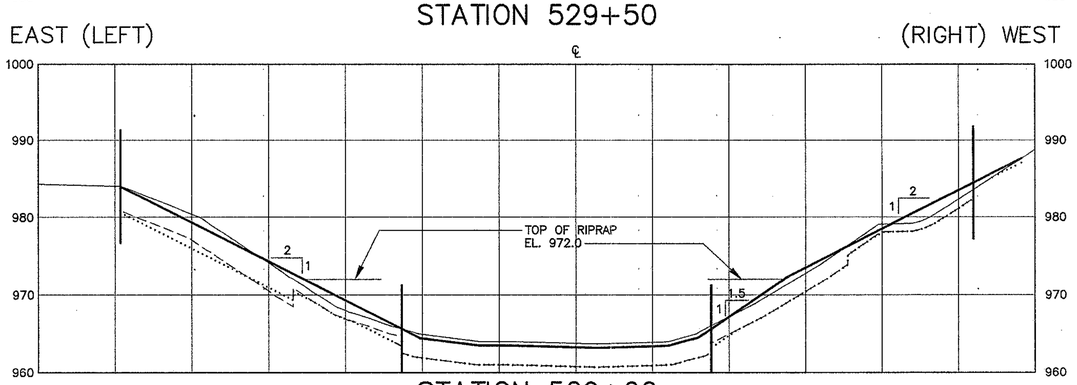
RIVERBED AND RIVERBANK ARMORING DETAILS

Sheet reference number:
2002
8 OF 17

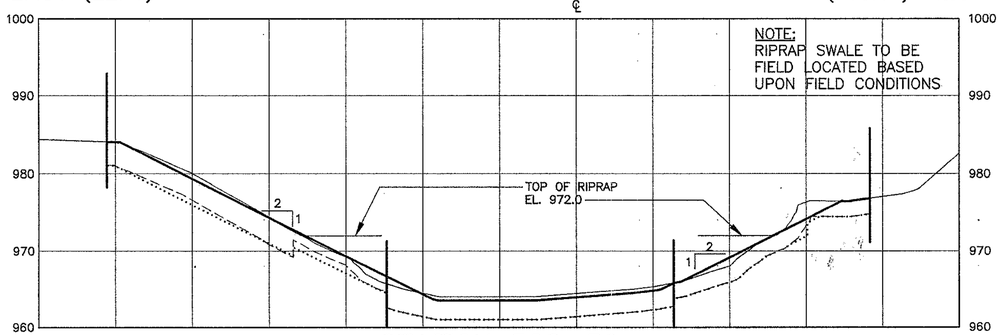
Due to the removal of selected features from the Draft Design for Phase 2, Stations 527+60 to 543+50, Drawings 9 through 11 are not included in this Final Drawings package



STATION 529+50



STATION 529+00



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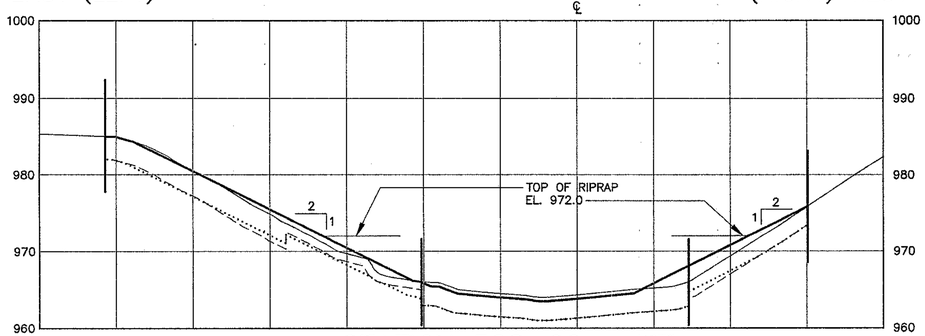
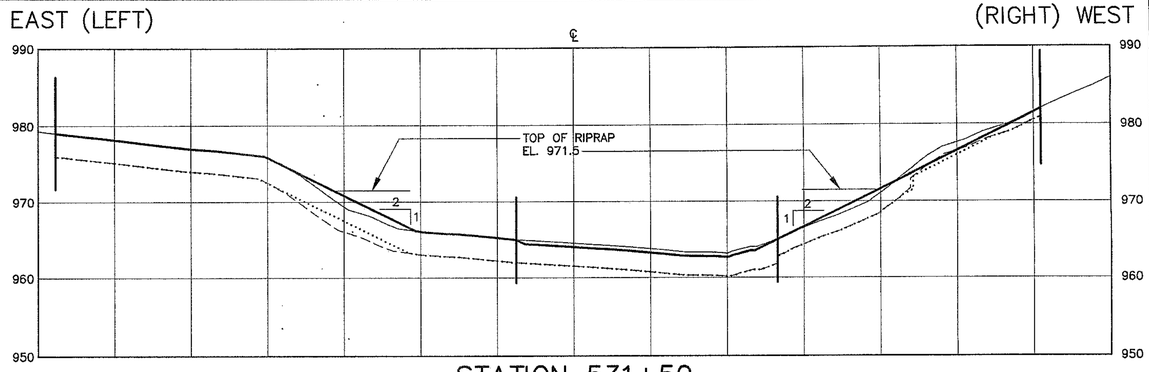


STATION 528+00

LEGEND
- EXISTING GRADE
- FINAL GRADE
- DEPTH OF CONTAMINATION
- EXCAVATION CUT LINE



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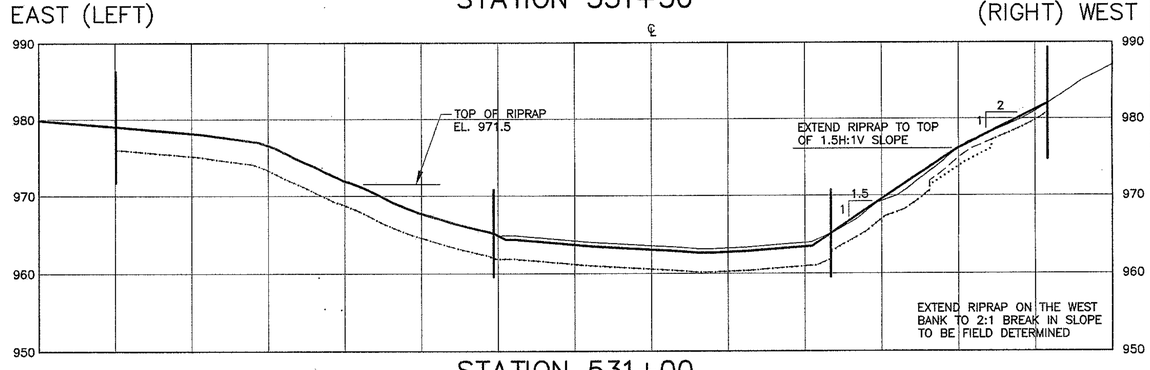
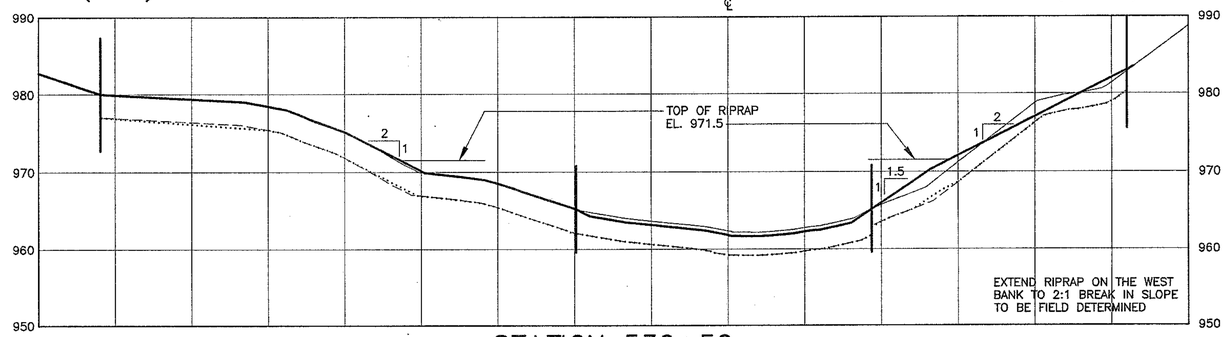
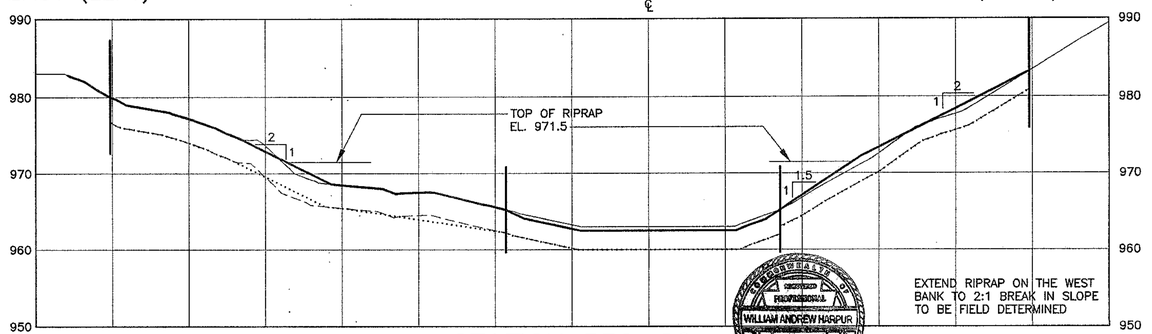


STATION 531+00



STATION 530+50



STATION 530+00

NOTE:
1. MATCH EXISTING GRADE UNLESS OTHERWISE NOTED.
2. MAXIMUM ALLOWABLE SLOPE IS 2H:1V, UNLESS OTHERWISE NOTED.
3. SLOPE INCLINATION FOR GEOCELL SHALL NOT EXCEED 1.5:1.
4. RIPRAP SHALL BE PLACED TO THE ELEVATION OF THE BREAK IN SLOPE WHEN THE SLOPE CHANGES FROM 1.5:1 BELOW THE BREAK TO 2:1 ABOVE THE BREAK. IF THERE IS NO BREAK IN SLOPE, RIPRAP SHALL EXTEND UP THE RIVER BANK TO THE MINIMUM ELEVATION AS INDICATED AT EACH SECTION.

COMMONWEALTH OF PENNSYLVANIA
WILLIAM ANDREW HARPUR
ENGINEER
PE054423E
2-18-04

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.
B	FINAL DESIGN SUBMITTAL	2/20/04	
A	DRAFT DESIGN SUBMITTAL	10/24/03	

Date: 2/20/04 | Rev: B
Designed by: MHN/WC | Drawn by: EDIPATTA | Chkd by: T.DELANO | Reviewed by:
Design file no:
SPEC. No.:
File name: 2006-2010
Plot date: 10/24/03
Plot scale: 45 Slots
Submitted by:
Chief, Arch. Section

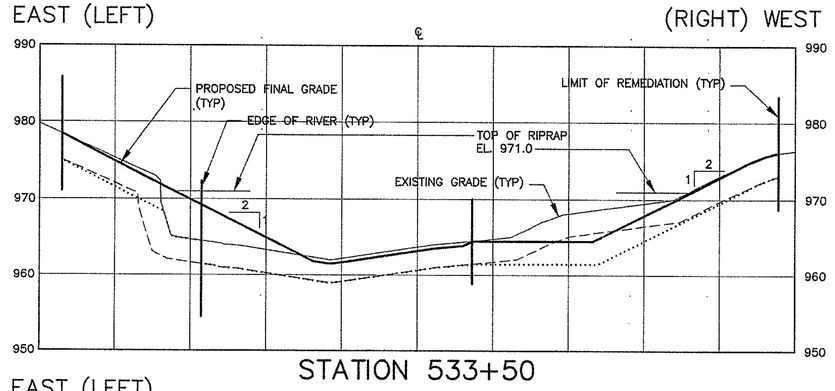
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS
WOODARD & CURRAN

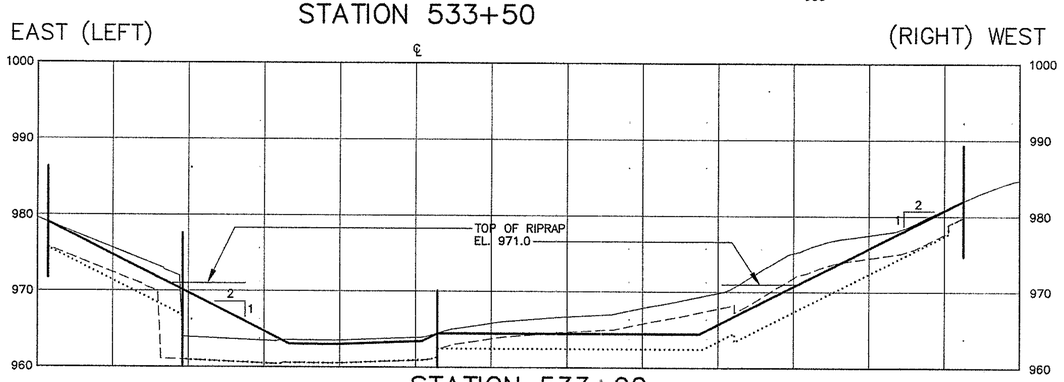
1.5 MILE REMOVAL ACTION - PHASE 2 - STA 527+00 TO STA 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

CROSS SECTIONS
SHEET 1 OF 5

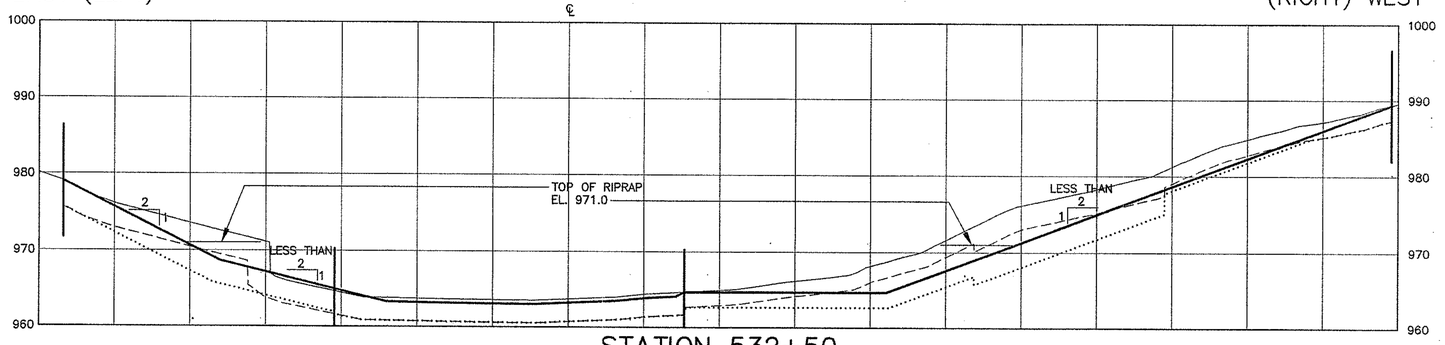
Sheet reference number:
2006
12 OF 17



STATION 533+50



STATION 533+00



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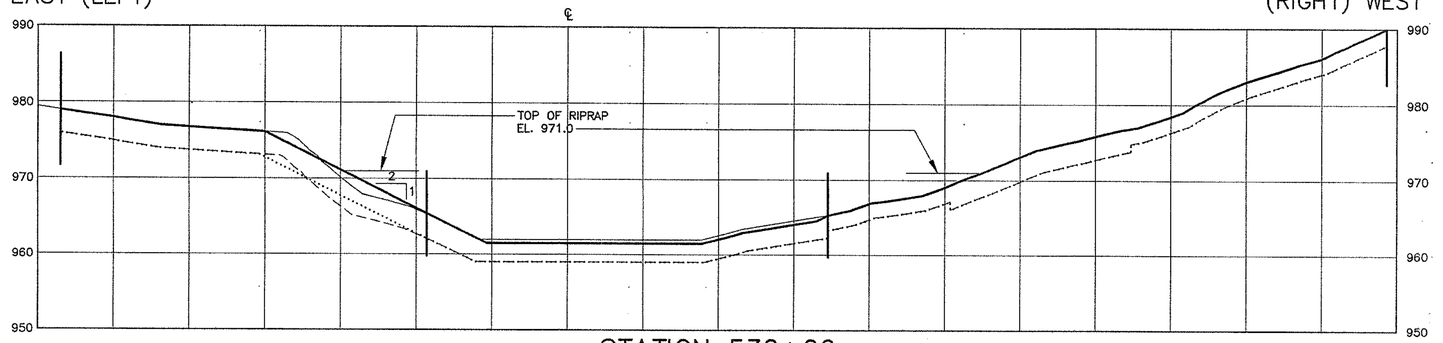
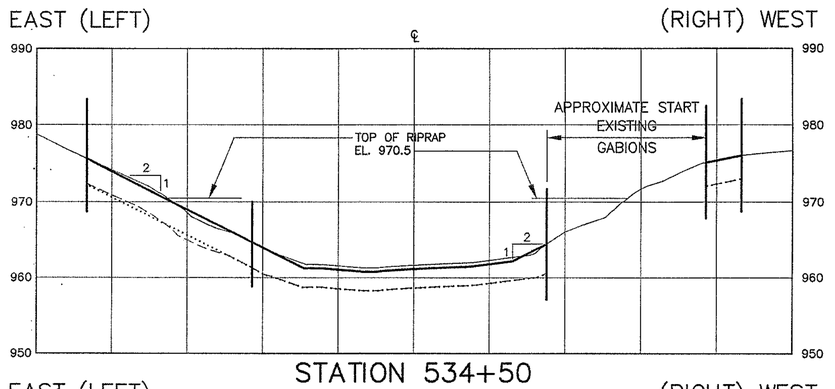
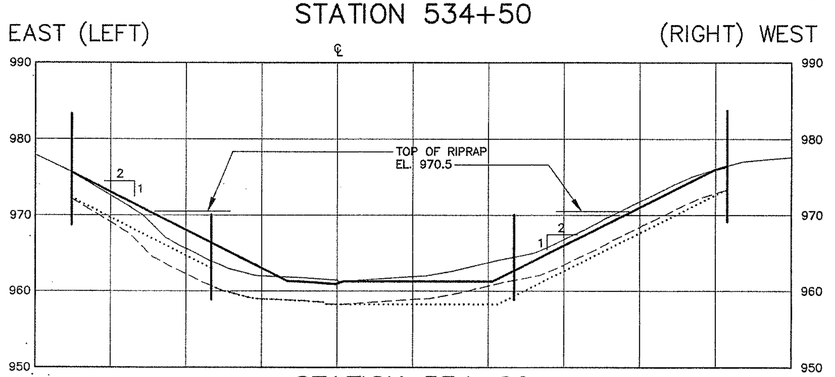


STATION 532+00



STATION 534+50



STATION 534+00

LEGEND

- EXISTING GRADE
- FINAL GRADE
- DEPTH OF CONTAMINATION
- EXCAVATION CUT LINE

NOTE:

1. MATCH EXISTING GRADE UNLESS OTHERWISE NOTED.
2. MAXIMUM ALLOWABLE SLOPE IS 2H:1V, UNLESS OTHERWISE NOTED.
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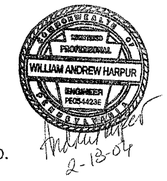


FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
B	FINAL DESIGN SUBMITTAL	2/2/04	
A	DRAFT DESIGN SUBMITTAL	10/1/03	

Date: 2/20/04 | Rev. B
Designed by: MHH/WC
Drawn by: E.DIPATTA
Ckd by: T.DELANO
Reviewed by:
SPEC. No.:
Design file no:
File name: 2006-2010
Plot date: 10/24/03
Plot scale: AS SHOWN
Submitted by: Chief, Arch. Section

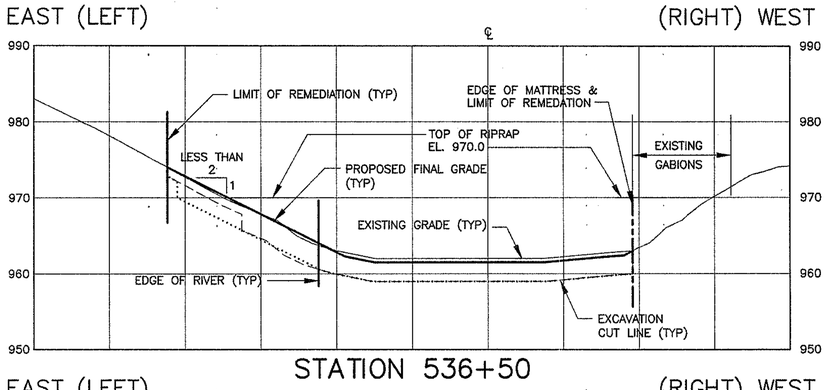
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS, INC. / WOODLOT

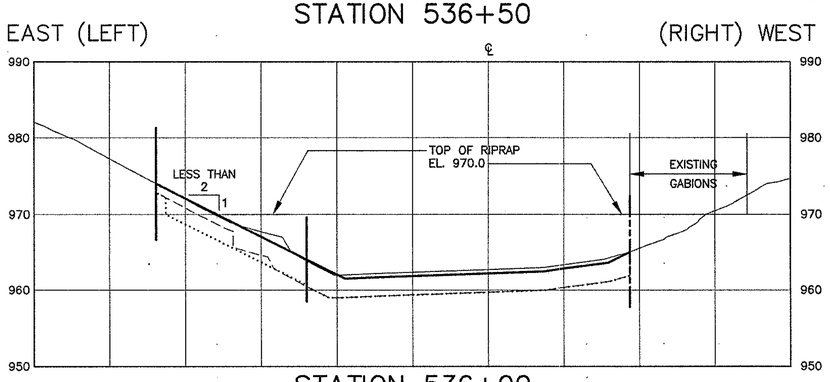
1.5 MILE REMOVAL ACTION - PHASE 2 - STA. 527+60 TO STA. 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

CROSS SECTIONS
SHEET 2 OF 5

Sheet reference number:
2007
13 OF 17



STATION 536+50



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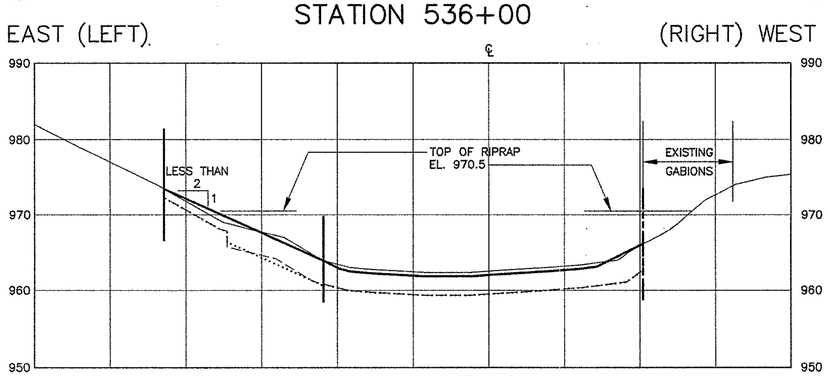
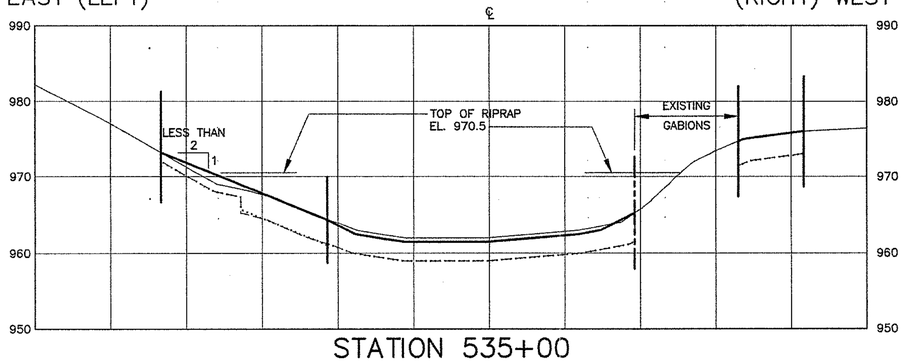


STATION 535+50



STATION 535+00

LEGEND

- EXISTING GRADE
- FINAL GRADE
- DEPTH OF CONTAMINATION
- EXCAVATION CUT LINE

NOTE:
1. MATCH EXISTING GRADE UNLESS OTHERWISE NOTED.
2. MAXIMUM ALLOWABLE SLOPE IS 2H:1V, UNLESS OTHERWISE NOTED.
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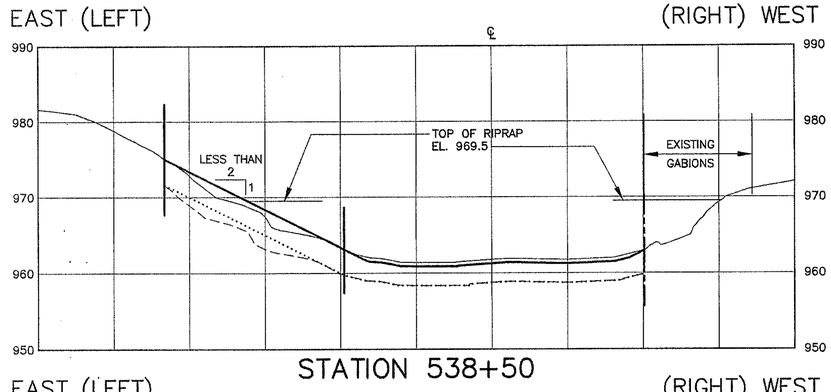
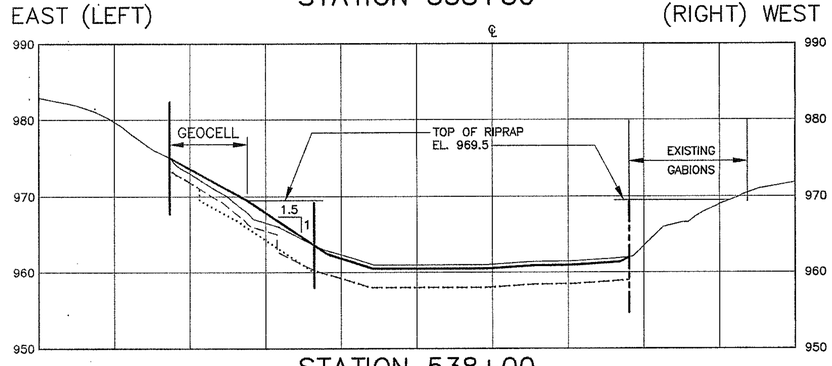


STATION 538+50



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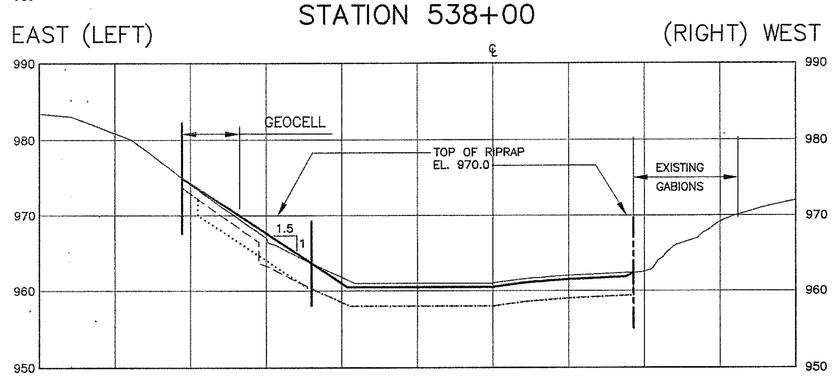

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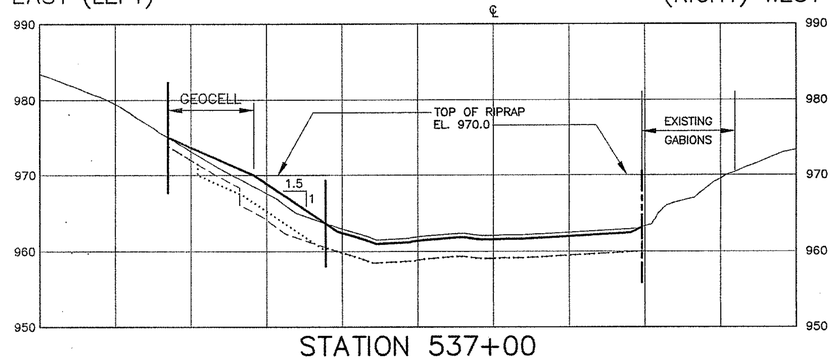


STATION 537+00

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
B	FINAL DESIGN SUBMITTAL	2/20/04	
A	DRAFT DESIGN SUBMITTAL	10/28/03	

Designed by: MNH/WC
Drwn by: EJMFAKTA
Ckd by: T.DELANO
Reviewed by:
Submitted by: Chief, Arch. Section
Date: 2/20/04
Design file no:
SPEC. No.:
File name: 2006-2010
Plot date: 10/24/03
Plot scale: AS SHOWN
Rev: B

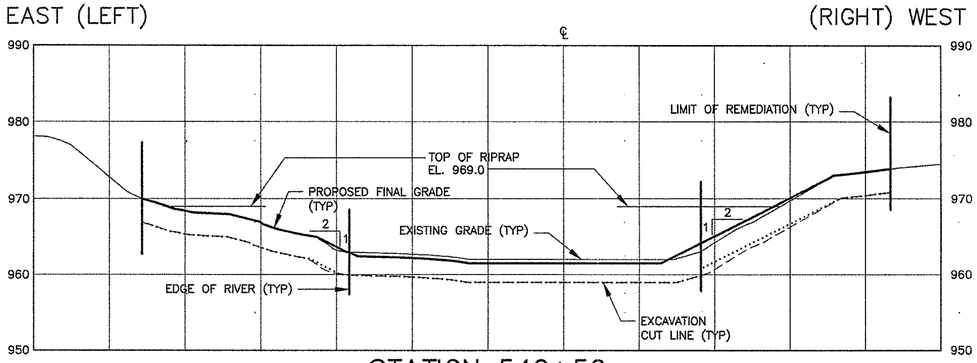
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS

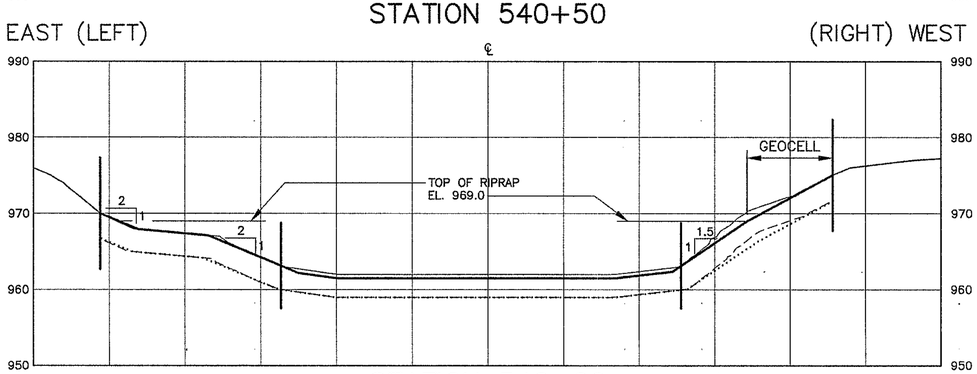
1.5 MILE REMOVAL ACTION - PHASE 2 - STA 507+60 TO STA 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

CROSS SECTIONS
SHEET 3 OF 5

Sheet reference number:
2008
14 OF 17



STATION 540+50



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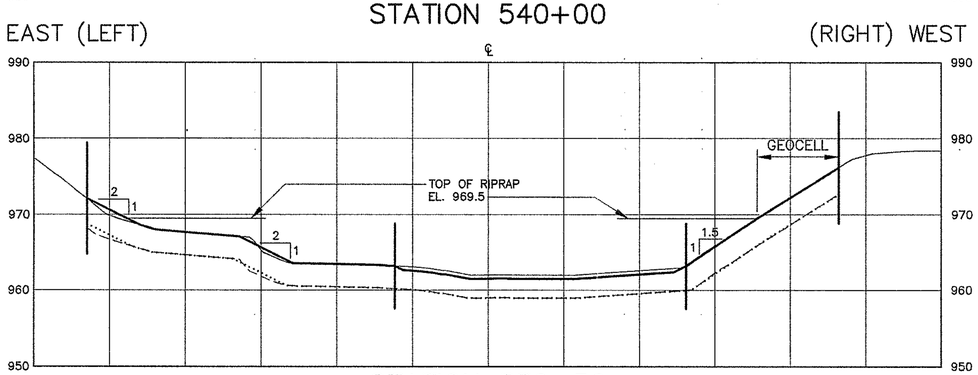

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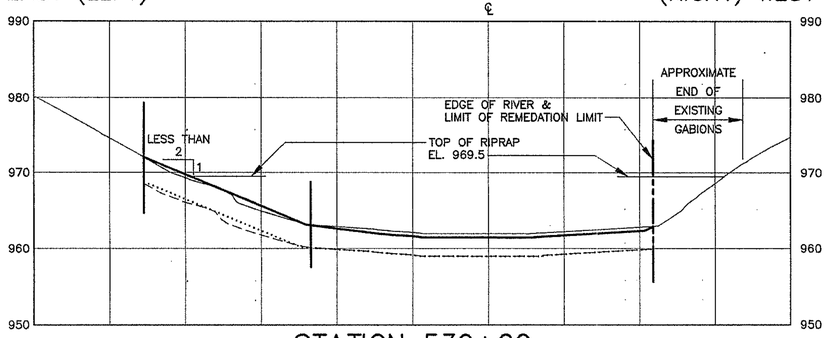

STATION 539+00

LEGEND

- EXISTING GRADE
- FINAL GRADE
- DEPTH OF CONTAMINATION
- EXCAVATION CUT LINE

NOTE:

1. MATCH EXISTING GRADE UNLESS OTHERWISE NOTED.
2. MAXIMUM ALLOWABLE SLOPE IS 2H:1V, UNLESS OTHERWISE NOTED.
3. SLOPE INCLINATION FOR GEOCELL SHALL NOT EXCEED 1.5:1.
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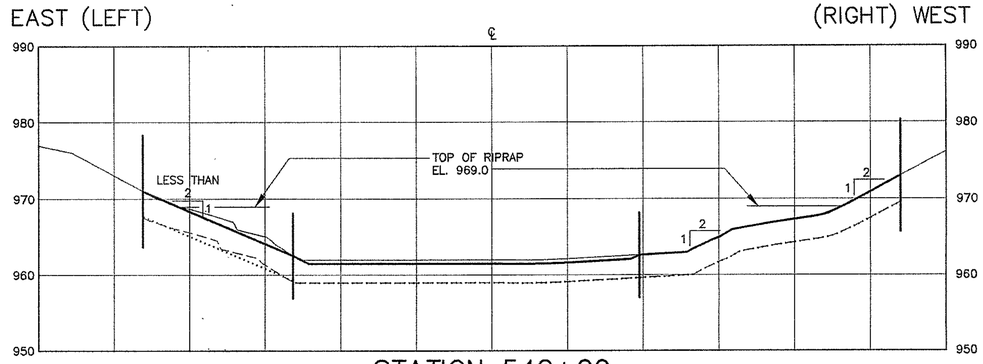
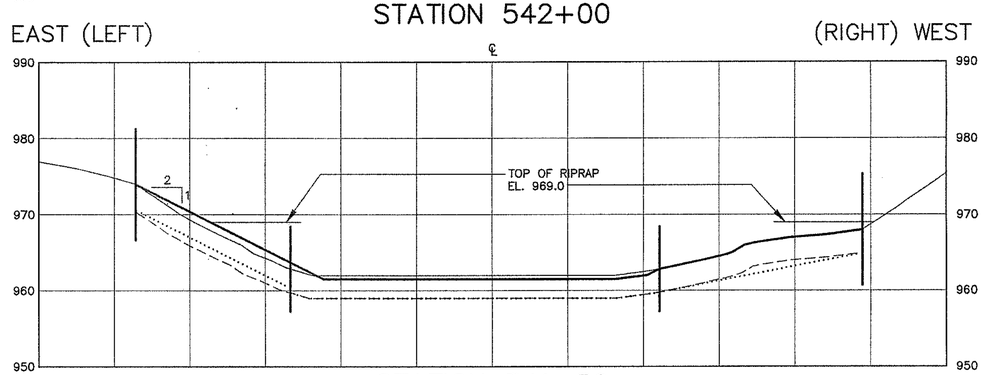


STATION 542+00



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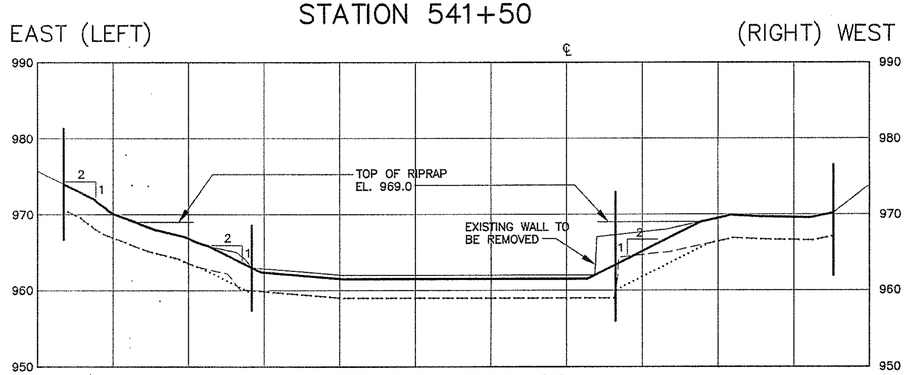
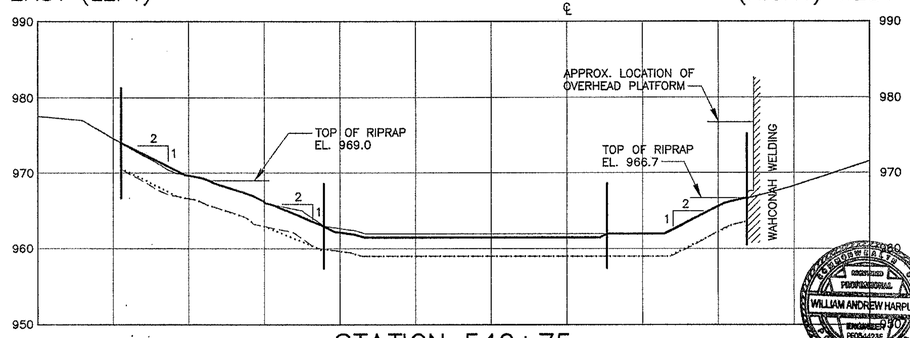


STATION 541+00



STATION 540+75

2-18-04

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
A	DRAFT DESIGN SUBMITTAL	12/8/04	
B	FINAL DESIGN SUBMITTAL	2/18/04	

Designed by: MNH/WC
Drawn by: E.DIPATTA
Ckd by: T.DELAND
Reviewed by:
Submitted by: Chief, Arch. Section

Date: 2/20/04
Design file no:
SPEC. No.:
File name: 2008-2010
Plot. date: 10/24/03
Plot. scale: AS SHOWN
Rev: B

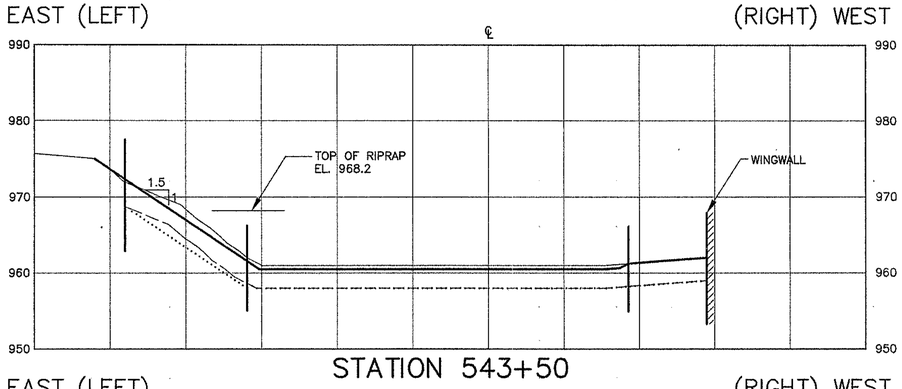
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WOODLOT ENVIRONMENTAL
WESTON SOLUTIONS

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 527+60 TO STA 543+90
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

CROSS SECTIONS
SHEET 4 OF 5

Sheet reference number:
2009
15 OF 17



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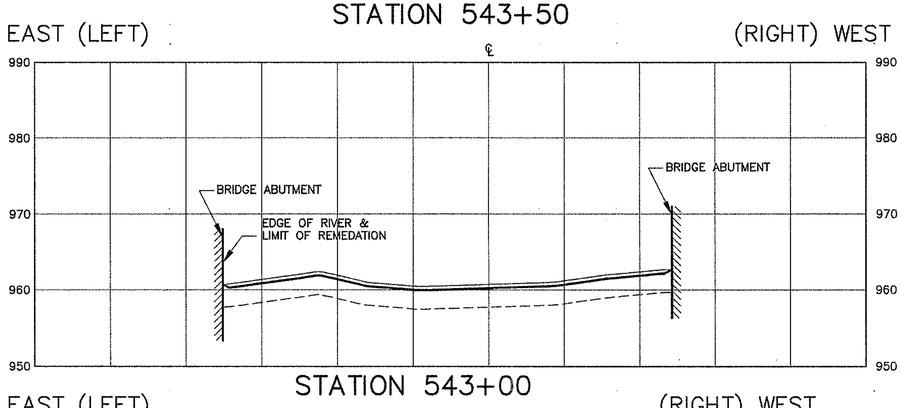

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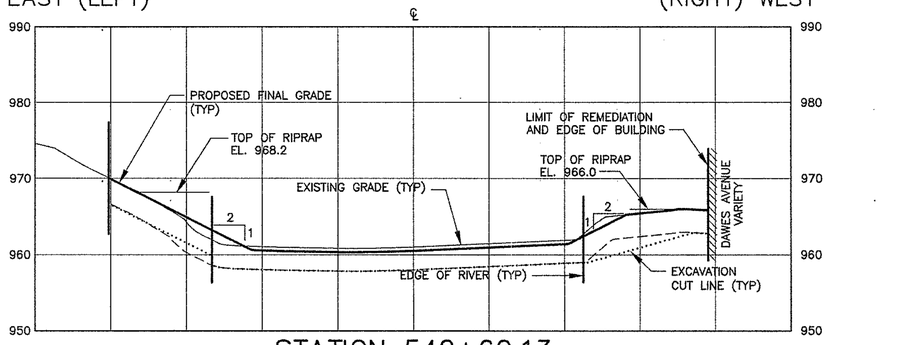

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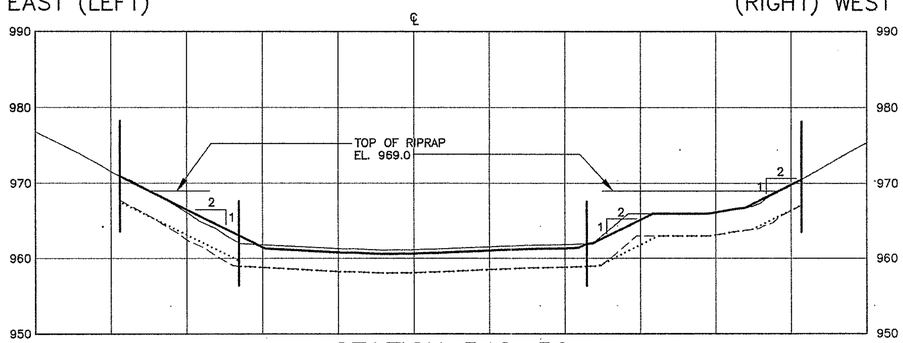

STATION 542+50

LEGEND

- EXISTING GRADE
- FINAL GRADE
- DEPTH OF CONTAMINATION
- EXCAVATION CUT LINE

NOTE:
1. MATCH EXISTING GRADE UNLESS OTHERWISE NOTED.
2. MAXIMUM ALLOWABLE SLOPE IS 2H:1V, UNLESS OTHERWISE NOTED.
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COMMONWEALTH OF MASSACHUSETTS
REGISTERED PROFESSIONAL
WILLIAM ANDREW HARPUR
ENGINEER
No. 044236

Andrew Harpur 2-18-04

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
A	DRAFT DESIGN SUBMITTAL	12/8/03	
B	FINAL DESIGN SUBMITTAL	2/20/04	

Designed by: MNH/WC
Drn. by: E.DIFATTA
Ckd by: T.DELANO
Reviewed by:
Submitted by: Chief, Arch. Section
Date: 2/20/04
Design file no:
SPEC. No.:
File name: 2006-2010
Plot. date: 10/24/03
Plot. scale: AS SHOWN
Rev. B

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WOODLOT ALTERNATIVES, INC.
WESTON SOLUTIONS

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 527+60 TO STA 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

CROSS SECTIONS
SHEET 5 OF 5

Sheet reference number:
2010
16 OF 17

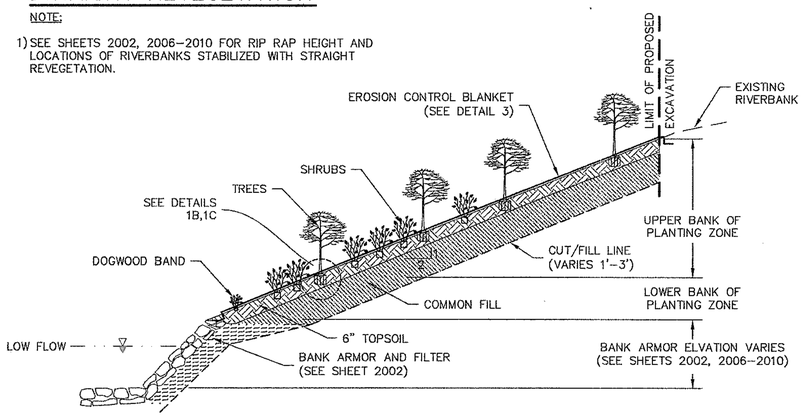
BANK REVEGETATION (TYP.) 1

NOT TO SCALE (SLOPE GRADE AND LENGTH VARY)

STRAIGHT REVEGETATION

NOTE:

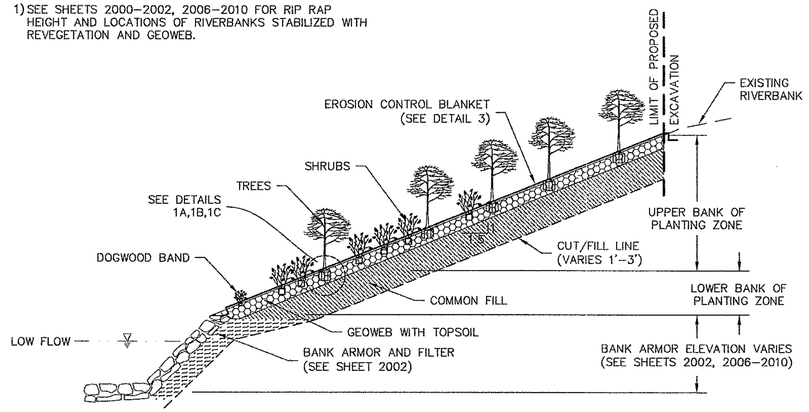
1) SEE SHEETS 2002, 2006–2010 FOR RIP RAP HEIGHT AND LOCATIONS OF RIVERBANKS STABILIZED WITH STRAIGHT REVEGETATION.

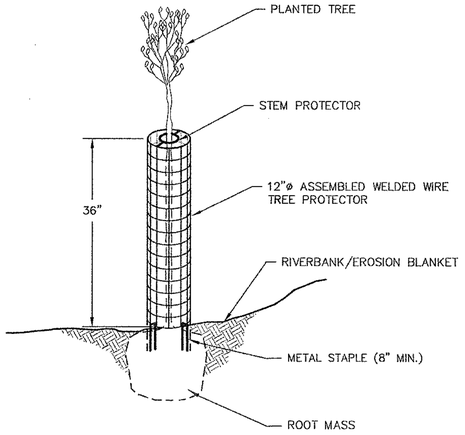


GEOWEB REVEGETATION

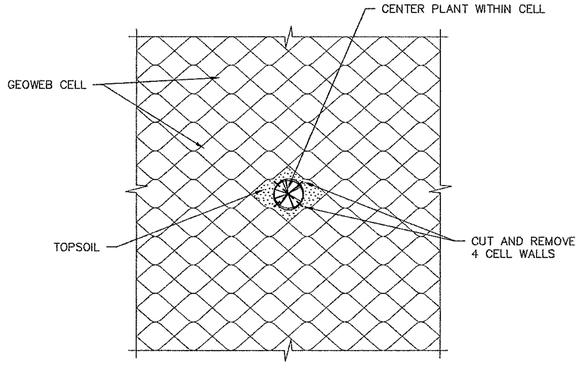
NOTE:

1) SEE SHEETS 2000–2002, 2006–2010 FOR RIP RAP HEIGHT AND LOCATIONS OF RIVERBANKS STABILIZED WITH REVEGETATION AND GEOWEB.

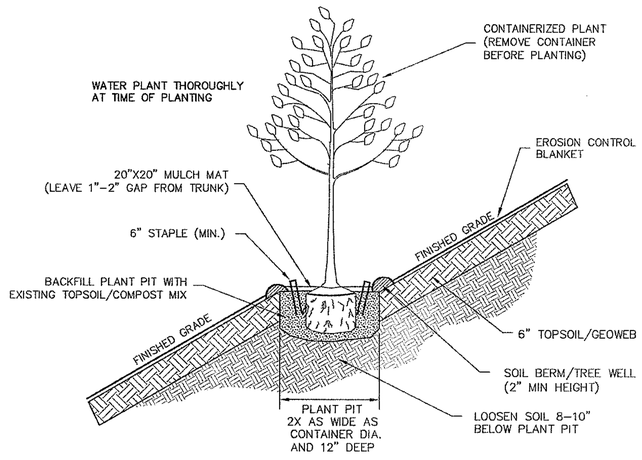




DETAIL 1C–TREE PROTECTOR



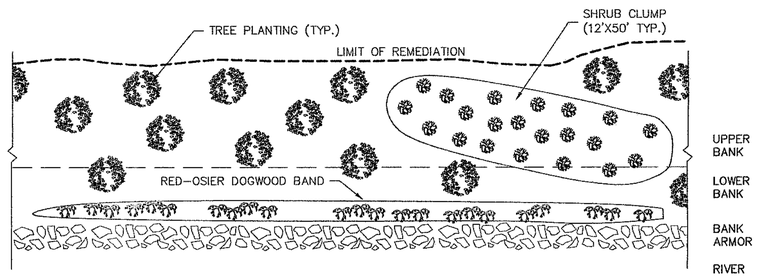
DETAIL 1A–GEOCELL PLANTING



DETAIL 1B–TREE PLANTING

PLANTING LAYOUT FOR REVEGETATION AREAS (TYP.) 2

NOT TO SCALE



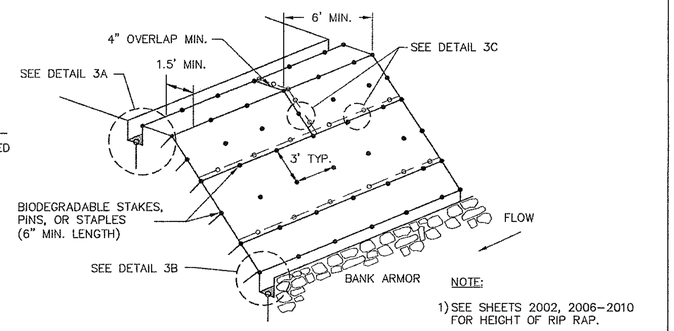
NOTE:

1) SEE SHEETS 2002, 2006–2010 FOR HEIGHT OF RIP RAP.

EROSION CONTROL BLANKET (TYP.) 3

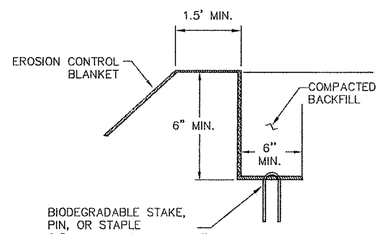
NOT TO SCALE

ISOMETRIC

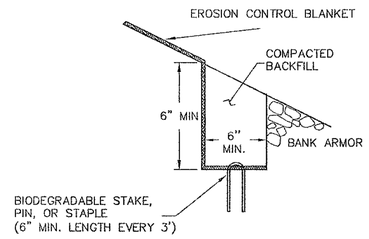


NOTE:

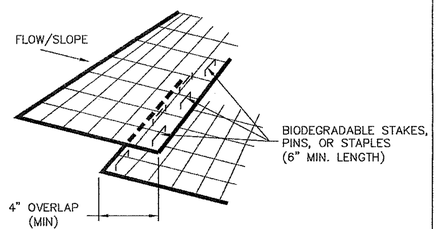
1) SEE SHEETS 2002, 2006–2010 FOR HEIGHT OF RIP RAP.



DETAIL 3A



DETAIL 3B



DETAIL 3C

FINAL DESIGN SUBMITTAL

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
B	FINAL DESIGN SUBMITTAL	2/2/04	
A	DRAFT DESIGN SUBMITTAL	10/28/03	

Designed by: WRS
Dwn by: KWH/FJD
Ckd by: MRC
Reviewed by:
Submitted by:
Chief, Arch. Section

Date:
Rev. B
Design file no:
SPEC. No.:
File name: 2101
Plot date: 2/11/04
Plot scale: 1:10

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS, INC. / WOODLOT ENVIRONMENTAL

1.5 MILE REMOVAL ACTION – PHASE 2 – STA 527+60 TO STA 543+50
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

REVEGETATION RESTORATION DETAILS

Sheet reference number:
2101